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CLAIMS

What is claimed is:

1. A telescopic wing system comprising:

(a) an outer wing segment;

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(b) an inner wing segment telescopically disposed from said outer wing segment, said outer wing segment and said inner wing segment each having a first end and a second end; and

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(c) an actuator comprising a coiled tube composed of a shape memory alloy, said actuator fastened to said second end of said outer wing segment and to said first end of said inner wing segment so that said actuator is disposed lengthwise in an extended fashion within said telescopic wing system, said coiled tube contracting lengthwise when heated thereby extending said inner wing segment from said outer wing segment.

2. The telescopic wing system of claim 1, wherein said actuator is activated by a fluid passing through said coiled tube.

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3. The telescopic wing system of claim 2, wherein said fluid is a liquid.

4. The telescopic wing system of claim 3, wherein said fluid is vented after passing through said actuator.

5. The telescopic wing system of claim 3, wherein said fluid is re-circulated after passing through said actuator.

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6. The telescopic wing system of claim 2, wherein said fluid is a gas.

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7. The telescopic wing system of claim 6, wherein said fluid is vented after passing through said actuator.

- 1 8. The telescopic wing system of claim 6, wherein said fluid is re-circulated after passing through said actuator.
9. The telescopic wing system of claim 1, wherein said actuator is activated by an electrical current.
- 5 10. The telescopic wing system of claim 1, wherein said actuator is activated by a fluid passing through said coiled tube and by an electrical current.
11. A telescopic wing system of claim 1, further comprising:
- (d) a resilient element fastened to said inner wing segment and to said telescopic wing system so that said resilient element is elongated when said inner wing
- 10 segment is extended, said resilient element retracting said inner wing segment when said actuator is cooled.
12. The telescopic wing system of claim 11, wherein said actuator is activated by a fluid passing through said coiled tube.
13. The telescopic wing system of claim 12, wherein said fluid is a liquid.
- 15 14. The telescopic wing system of claim 13, wherein said fluid is vented after passing through said actuator.
15. The telescopic wing system of claim 13, wherein said fluid is re-circulated after passing through said actuator.
16. The telescopic wing system of claim 12, wherein said fluid is a gas.
- 20 17. The telescopic wing system of claim 16, wherein said fluid is vented after passing through said actuator.
- 22 18. The telescopic wing system of claim 16, wherein said fluid is re-circulated after

1 passing through said actuator.

19. The telescopic wing system of claim 11, wherein said actuator is activated by an electrical current.

20. The telescopic wing system of claim 11, wherein said actuator is activated by a fluid
5 passing through said coiled tube and by an electrical current.

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